

# AMENDMENTS TO THE CLAIMS

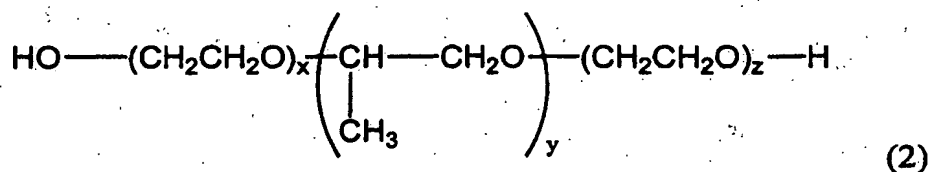
1. (Currently Amended): A method for limiting the penetration into the scalp and/or the hair of at least one dye contained in a hair dyeing composition comprising applying on the scalp and/or on the hair, as a pre-treatment, before a hair dyeing process using the hair dyeing composition, a dye penetration limiting effective amount of an antipenetrating composition ~~A hair pre-treatment anti-penetration composition~~ comprising, in a physiologically acceptable medium, an ~~efficient~~ amount higher than 5% in weight of the weight based on the total volume of the composition of at least one oxyethylenated polymer selected from the group consisting of ~~in the group comprising~~:

a) polyethylene glycols with the general formula (1):



where n is higher than 45 and lower than 795,

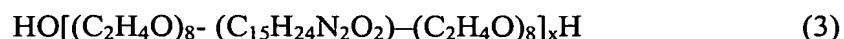
b) block polymers with ethylene oxide and propylene oxide blocks, having the formula (2):



where

- x and z are such that at least one of x and z is higher than 75, and
- y is higher than 30,

c) the polyethylene glycol copolymer comprising 8 successive ethylene oxide and dicyclohexylmethane diisocyanate groups having the formula (3):



where x ranges from 1 to 4 such that the copolymer average molecular mass is  $1800 \text{ g.mol}^{-1}$ ,  
and

d) ~~the mixtures of two or more compounds a), b) and c)~~ mixtures thereof.

2. (Currently Amended): ~~A composition~~ The method according to claim 1,  
~~characterized in that~~ wherein the oxyethylenated polymer amount in the composition is lower  
than 20% in weight, ~~and preferably lower than 15% in weight and more preferably in the~~  
~~order of 10% in weight~~ based on the total volume of the composition.

3. (Currently Amended): ~~A composition~~ The method according to claim 1 ~~or 2~~,  
~~characterized in that the~~ wherein the composition comprises a polyethylene glycol a) and the  
polyethylene glycol comprises 75 to 600 ethylene oxide groups per molecule.

4. (Currently Amended): ~~A composition~~ The method according to claim 3,  
~~characterized in that~~ wherein the polyethylene glycol is selected ~~amongst~~ from the group  
consisting of the polyethylene glycols PEG-90, PEG-100, PEG-135, PEG-180, PEG-200,  
PEG-240, PEG-350 and PEG-454.

5. (Currently Amended): ~~A composition~~ The method according to claim 1 ~~or 2~~,  
~~characterized in that, in the case of~~ wherein the composition comprises a block polymer with  
ethylene oxide and propylene oxide blocks b), having the formula 2), and wherein at least one  
of x and z is equal to or higher than 80 and y is higher than 45.

6. (Currently Amended): ~~A composition~~ The method according to claim 5,  
~~characterized in that~~ wherein x and z are equal to 98 and y is equal to 67.

7. (Currently Amended): ~~A composition~~ The method according to ~~any of the preceding claims, characterized in that~~ claim 1, wherein the physiologically acceptable medium is a solubilizing medium for the oxyethylenated polymer, ~~preferably having a bacteriological property.~~

8. (Currently Amended): ~~A composition~~ The method according to ~~any of the preceding claims, characterized in that~~ claim 1, wherein the physiologically acceptable medium comprises a solvent or a mixture of solvents for the oxyethylenated polymer.

9. (Currently Amended): ~~A composition~~ The method according to claim 8, ~~characterized in that~~ wherein the solvent is selected ~~amongst~~ from the group consisting of water, alcohols, ethers, dimethylsulfoxide, N-methylpyrrolidone, acetones, and the mixtures thereof.

10. (Currently Amended): ~~A composition~~ The method according to claim 9, ~~characterized in that~~ wherein the solvent comprises at least one alcohol ~~the alcohols are selected amongst~~ from the group consisting of alkanols, benzyl alcohol ~~or~~ and alkanediols.

11. (Currently Amended): ~~A composition~~ The method according to claim 10, ~~characterized in that~~ wherein the alkanols are (C<sub>1</sub>-C<sub>6</sub>) lower alkanols, ~~preferably ethanol and isopropanol.~~

12. (Currently Amended): ~~A composition~~ The method according to claim 10, ~~characterized in that~~ wherein the alkanediols are selected ~~amongst~~ from the group consisting of ethylene glycol, propylene glycol and pentanediol.

13. (Currently Amended): ~~A composition~~ The method according to claim 9, ~~characterized in that~~ wherein the solvent is a water/alcohol mixture.

14. (Currently Amended): ~~A composition~~ The method according to claim 13, ~~characterized in that~~ wherein the alcohol accounts up to 80% in volume of the water/alcohol mixture.

15. (Currently Amended): ~~A composition~~ The method according to claim 14, ~~characterized in that~~ wherein the water/alcohol mixture is a water/ethanol mixture comprising 70% in volume of ethanol based on the weight of the water/ethanol mixture.

16. (Currently Amended): ~~A composition~~ The method according to ~~any of the preceding claims, characterized in that it additionally contains~~ claim 1, wherein the composition further comprises ~~cosmetic builders selected amongst~~ conventional gellants, ~~and/or~~ thickening agents, anionic, non ionic, cationic or amphoteric surfactants, propenetrating agents, emulsifiers, perfumes, preservatives, fillers, sunscreens, proteins, vitamins, provitamins, anionic, non ionic, cationic or amphoteric non fixing polymers, hydrating agents, emollients, softening agents, mineral, vegetable or synthetic oils, hydrophilic or lipophilic active ingredients ~~such as ceramides and pseudoceramides~~, anti-foaming agents, antiperspirant agents, anti-free radical agents, bactericides, sequestrants, anti-dandruff agents, alkalizing agents, volatile or non volatile, linear or cyclic, modified or not, silicones, polyols, ~~and or~~ or any other additive conventionally used in cosmetic compositions intended to be applied on the hair.

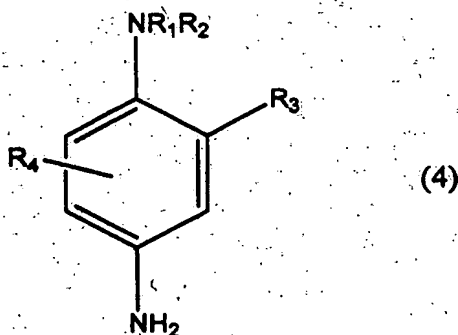
17. (Canceled).

18. (Currently Amended): A method according to claim ~~[[17]]~~ 1, ~~characterized in that~~ wherein the application duration on the ~~hair~~ scalp and on the hair of the antipenetrating composition is from 5 seconds to one hour, ~~and preferably from 1 to 10 minutes.~~

19. (Currently Amended): A method according to claim ~~62~~ 17 or 18, ~~characterized in that wherein the~~ oxidation dye is selected ~~amongst~~ from the group consisting of oxidation bases, coupling agents, orthodiphenols and the mixtures thereof.

20. (Currently Amended): A method according to claim 19, ~~characterized in that wherein the~~ oxidation bases are selected ~~amongst~~ from the group consisting of ortho- and para-phenylene diamines.

21. (Currently Amended): A method according to claim 20, ~~characterized in that wherein the~~ oxidation bases are selected ~~amongst~~ from the group consisting of para-phenylenediamines having the formula (4):



where:

R<sub>1</sub> represents a hydrogen atom, a C<sub>1</sub>-C<sub>4</sub> alkyl moiety, a C<sub>1</sub>-C<sub>4</sub> monohydroxyalkyl, C<sub>2</sub>-C<sub>4</sub> polyhydroxyalkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy(C<sub>1</sub>-C<sub>4</sub>)alkyl, C<sub>1</sub>-C<sub>4</sub> alkyl substituted by a nitrogen, phenyl or 4'-aminophenyl group;

R<sub>2</sub> represents a hydrogen atom, C<sub>1</sub>-C<sub>4</sub> alkyl radical, a C<sub>1</sub>-C<sub>4</sub> monohydroxyalkyl, or C<sub>2</sub>-C<sub>4</sub> polyhydroxyalkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy(C<sub>1</sub>-C<sub>4</sub>)alkyl or C<sub>1</sub>-C<sub>4</sub> alkyl substituted by a nitrogen group;

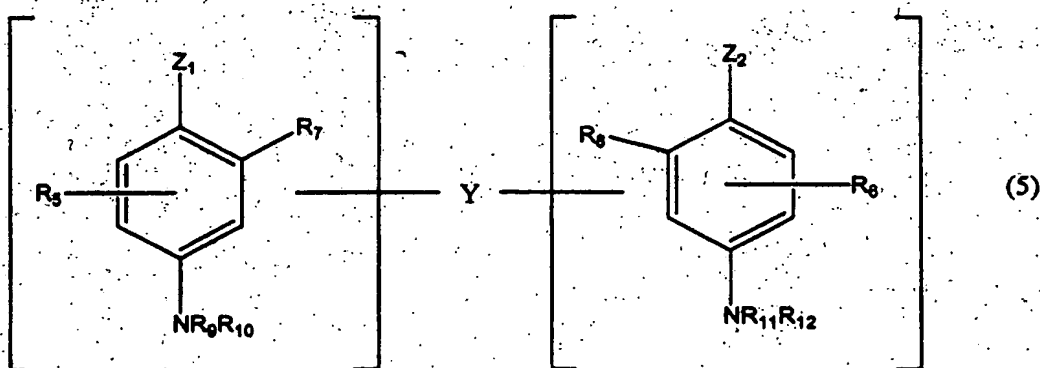
R<sub>3</sub> represents a hydrogen atom, a halogen atom ~~such as a chlorine atom~~, a C<sub>1</sub>-C<sub>4</sub> alkyl moiety, a sulfo, carboxy, a C<sub>1</sub>-C<sub>4</sub> monohydroxyalkyl, or C<sub>1</sub>-C<sub>4</sub> hydroxyalkoxy, C<sub>1</sub>-C<sub>4</sub> acetylaminoalkoxy, C<sub>1</sub>-C<sub>4</sub> mesylaminoalkoxy or C<sub>1</sub>-C<sub>4</sub> carbamoylaminoalkoxy;

R<sub>4</sub> represents a hydrogen, halogen atom or a C<sub>1</sub>-C<sub>4</sub> alkyl moiety;

R<sub>1</sub> and R<sub>2</sub> may also form with the nitrogen atom carrying them a 5 or 6 member nitrogen heteroring optionally substituted by one or more alkyl, hydroxy or ureido groups.

22. (Currently Amended): A method according to claim 21, ~~characterized in that~~ wherein the para-phenylenediamines are selected ~~amongst~~ from the group consisting of paraphenylenediamine, paratoluylenediamine, 2-isopropyl-paraphenylenediamine, 2-β-hydroxyethyl-paraphenylenediamine, 2,6-dimethyl-paraphenylenediamine, N,N-bis-(β-hydroxyethyl)-paraphenylenediamine, 2-chloro-paraphenylenediamine, and their addition salts with an acid.

23. (Currently Amended): A method according to claim 20, ~~characterized in that~~ wherein the oxidation bases are double bases having the formula (5):

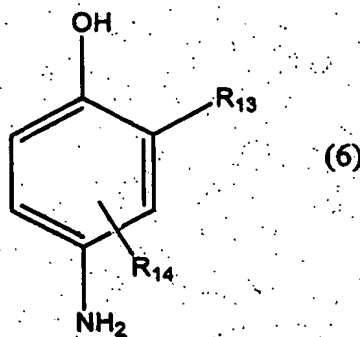


where:

- $Z_1$  and  $Z_2$ , whether identical or different, represent a hydroxyl or  $-NH_2$  moiety optionally substituted by a  $C_1$ - $C_4$  alkyl moiety or by a Y-binding branch;
- the Y binding branch represents an alkylene chain comprising 1 to 14 carbon atoms, linear or branched, able to be interrupted or ending with one or more nitrogen groups and/or by one or more heteroatoms such as oxygen, sulphur or nitrogen atoms, and optionally substituted by one or more  $C_1$ - $C_6$  hydroxyl or alkoxy moieties;
- $R_5$  and  $R_6$  represent a hydrogen or a halogen atom, a  $C_1$ - $C_4$  alkyl,  $C_1$ - $C_4$  monohydroxyalkyl,  $C_2$ - $C_4$  polyhydroxyalkyl,  $C_1$ - $C_4$  aminoalkyl moiety or a Y binding branch;
- $R_7$ ,  $R_8$ ,  $R_9$ ,  $R_{10}$ ,  $R_{11}$  and  $R_{12}$ , whether identical or different, represent a hydrogen atom, a Y binding branch or a  $C_1$ - $C_4$  alkyl moiety; on the condition that the compounds with formula (5) only have one Y binding branch per molecule.

24. (Currently Amended): A method according to claim 23, ~~characterized in that~~ wherein the double bases are selected ~~amongst~~ from the group consisting of N,N'-bis-( $\beta$ -hydroxyethyl) N,N'-bis-(4'-aminophenyl) 1,3-diamino propanol, N,N'-bis-( $\beta$ -hydroxyethyl) N,N'-bis-(4'-aminophenyl) ethylenediamine, N,N'-bis-(4-aminophenyl) tetramethylenediamine, N,N'-bis-( $\beta$ -hydroxyethyl) N,N'-bis-(4-aminophenyl) tetramethylenediamine, N,N'-bis-(4-methyl-aminophenyl) tetramethylenediamine, N,N'-bis-(ethyl) N,N'-bis-(4'-amino, 3'-methyl) ethylenediamine, 1,8-bis-(2,5-diaminophenoxy)-3,5-dioxaoctane, and their addition salts with an acid.

25. (Currently Amended): A method according to claim 20, ~~characterized in that~~  
wherein the oxidation bases are para-aminophenols having the formula (6):



where:

- R<sub>13</sub> represents a hydrogen atom, a halogen atom ~~such as fluorine~~, a C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> monohydroxyalkyl, (C<sub>1</sub>-C<sub>4</sub>) alkoxy ~~alkoxy~~ (C<sub>1</sub>-C<sub>4</sub>) alkyl, ~~or~~ C<sub>1</sub>-C<sub>4</sub> aminoalkyl, or C<sub>1</sub>-C<sub>4</sub> hydroxyalkyl aminoalkyl(C<sub>1</sub>-C<sub>4</sub>) moiety; and
- R<sub>14</sub> represents a hydrogen atom or a halogen atom ~~such as fluorine~~, a C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> monohydroxyalkyl, C<sub>2</sub>-C<sub>4</sub> polyhydroxyalkyl, C<sub>1</sub>-C<sub>4</sub> aminoalkyl, C<sub>1</sub>-C<sub>4</sub> cyanoalkyl or (C<sub>1</sub>-C<sub>4</sub>)alkoxy(C<sub>1</sub>-C<sub>4</sub>)alkyl moiety.

26. (Currently Amended): A method according to claim 25, ~~characterized in that~~  
wherein the para-aminophenols are selected ~~amongst~~ from the group consisting of para-aminophenol, 4-amino-3-methyl-phenol, 4-amino-3-fluoro-phenol, 4-amino-3-hydroxymethyl-phenol, 4-amino-2-methyl-phenol, 4-amino-2-hydroxymethyl-phenol, 4-amino-2-methoxymethyl-phenol, 4-amino-2-aminomethyl-phenol, 4-amino-2-( $\beta$ -hydroxyethyl-aminomethyl)-phenol, and their addition salts with an acid.



27. (Currently Amended): A method according to claim 20, ~~characterized in that~~ wherein the oxidation bases are orthodiphenols selected ~~amongst~~ from the group consisting of 2-amino-phenol, 2-amino-1-hydroxy-5-methyl-benzene, 2-amino-1-hydroxy-6-methyl-benzene, 5-acetamido-2-amino-phenol, and their addition salts thereof with an acid.

28. (Currently Amended): A method according to claim 20, ~~characterized in that~~ wherein the oxidation bases are heterocyclic bases selected ~~amongst~~ from the group consisting of pyridine derivates, pyrimidine derivates, pyrazoline derivates, and their addition salts with an acid.

29. (Currently Amended): A method according to claim 28, ~~characterized in that~~ wherein the pyridine derivates are selected ~~amongst~~ from the group consisting of 2,5-diamino-pyridine, 2-(4-methoxyphenyl)amino-3-amino-pyridine, 2,3-diamino-6-methoxy-pyridine, 2-( $\beta$ -methoxyethyl)amino-3-amino-6-methoxy pyridine, and 3,4-diamino-pyridine.

30. (Currently Amended): A method according to claim 28, ~~characterized in that~~ wherein the pyrimidine derivates are selected ~~amongst~~ from the group consisting of 2,4,5,6-tetra-aminopyrimidine, 4-hydroxy-2,5,6-triaminopyrimidine, 2-hydroxy-4,5,6-triaminopyrimidine, 2,4-dihydroxy-5,6-diaminopyrimidine, 2,5,6-triaminopyrimidine, ~~and the~~ pyrazolo-pyrimidine derivates, ~~such as those mentioned in Patent Application FR-A-2 750 048 and amongst which one can mention~~ pyrazolo-[1,5-a]-pyrimidine-3,7-diamine; 2,5-dimethyl-pyrazolo-[1,5-a]-pyrimidine-3,7-diamine; pyrazolo-[1,5-a]-pyrimidine-3,5-diamine; 2,7-dimethyl-pyrazolo-[1,5-a]-pyrimidine-3,5-diamine; 3-amino-pyrazolo-[1,5-a]-pyrimidin-7-ol; 3-amino-pyrazolo-[1,5-a]-pyrimidin-5-ol; 2-(3-amino pyrazolo-[1,5-a]-pyrimidin-7-ylamino)-ethanol; 2-(7-amino-pyrazolo-[1,5-a]-pyrimidin-3-ylamino)-ethanol; 2-[(3-amino-

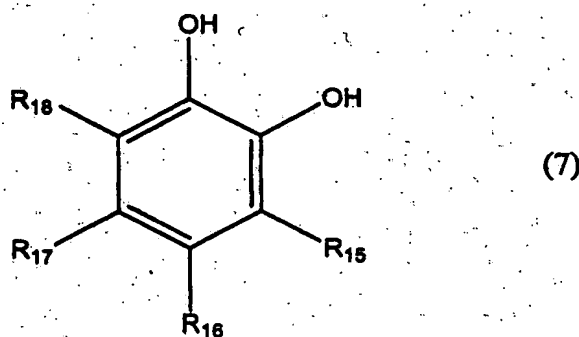
pyrazolo[1,5-a]pyrimidin-7-yl)-(2-hydroxy-ethyl)-amino]-ethanol; 2-[(7-amino-pyrazolo-[1,5-a]pyrimidin-3-yl)-(2-hydroxy-ethyl)-amino]-ethanol; 5,6-dimethyl-pyrazolo-[1,5-a]-pyrimidine-3,7-diamine; 2,6-dimethyl-pyrazolo-[1,5-a]-pyrimidine-3,7-diamine; 2,5,N7,N7-tetramethyl-pyrazolo-[1,5-a]-pyrimidine-3,7-diamine; 3-amino-5-methyl-7-imidazolylpropylamino pyrazolo-[1,5-a]-pyrimidine; and the addition salts thereof and their tautomeric forms, when there is a tautomeric balance.

31. (Currently Amended): A method according to claim 28, ~~characterized in that~~ wherein the pyrazole derivatives are selected ~~amongst~~ from the group consisting of 4,5-diamino-1-methyl-pyrazole, 3,4-diamino-pyrazole, 4,5-diamino-1-(4'-chlorobenzyl)-pyrazole, 4,5-diamino 1,3-dimethyl-pyrazole, 4,5-diamino-3-methyl-1-phenyl pyrazole, 4,5-diamino 1-methyl-3-phenyl-pyrazole, 4-amino-1,3-dimethyl-5--hydrazino-pyrazole, 1-benzyl-4,5-diamino-3-methyl-pyrazole, 4,5-diamino-3-tert-butyl-1-methylpyrazole, 4,5-diamino-1-tert-butyl-3-methyl-pyrazole, 4,5-diamino-1-( $\beta$ -hydroxyethyl)-3-methylpyrazole, 4,5-diamino-1-( $\beta$ -hydroxyethyl)-pyrazole, 4,5-diamino-1-ethyl-3-methyl-pyrazole, 4,5-diamino-1-ethyl-3-(4'-methoxyphenyl)-pyrazole, 4,5-diamino-1-ethyl-3-hydroxymethyl-pyrazole, 4,5-diamino-3-hydroxymethyl-1-methyl-pyrazole, 4,5-diamino-3-hydroxymethyl-1-isopropyl-pyrazole, 4,5-diamino-3-methyl-1-isopropyl-pyrazole, 4-amino-5-(2'-aminoethyl)amino-1,3-dimethyl-pyrazole, 4,5-triamino-pyrazole, 1-methyl-3,4,5-triamino-pyrazole, 3,5-diamino-1-methyl-4-methylamino-pyrazole, and 3,5-diamino-4-( $\beta$ -hydroxyethyl)amino-1-methyl-pyrazole.

32. (Currently Amended): A method according to claim 20, ~~any of claims 20 to 31,~~ ~~characterized in that~~ wherein the oxidation base accounts for 0.0005 to 12% in weight, ~~more preferably from 0.005 to 8% in weight~~ of the total weight of the composition.

33. (Currently Amended): A method according to claim 19, ~~characterized in that~~ wherein the orthodiphenols comprise a condensed benzene ring or an aromatic ring carrying at least two hydroxyl groups on two consecutive carbon atoms of the ring.

34. (Currently Amended): A method according to claim 33, ~~characterized in that~~ wherein the orthodiphenols are compounds having the formula:



where the  $R_{15}$  to  $R_{18}$  substituents, identical or different, represent a hydrogen atom, a halogen, hydroxyl, carboxyl, alkyl carboxylate, optionally substituted amino moiety, optionally substituted linear or branched alkyl, optionally substituted linear or branched alkenyl, optionally substituted cycloalkyl, alkoxy, alkoxyalkyl, alkoxyaryl, the aryl group being optionally substituted, aryl, aryl substituted, an optionally substituted heterocyclic moiety, a moiety optionally containing one or more silicon atoms, where two of the  $R_{15}$  to  $R_{18}$  substituents form together a saturated or an unsaturated ring optionally containing one or more heteroatoms and ~~optionally~~ optionally condensed with one or more saturated or unsaturated rings optionally containing one or more heteroatoms.

35. (Currently Amended): A method according to claim 33, ~~characterized in that~~ wherein the orthodiphenols are selected ~~amongst~~ from the group consisting of flavanols,

flavonols, anthocyaninidins, anthocyanines, hydroxybenzoates, flavones, iridoids, such compounds being optionally osylated and/or in the form of oligomers, optionally osylated hydroxystilbenes, 3,4-dihydroxyphenylalanine and the derivatives thereof, 2,3-dihydroxyphenylalanine and the derivatives thereof, 4,5-dihydroxyphenylalanine and the derivatives thereof, 4,5-dihydroxyindole and the derivatives thereof, 5,6-dihydroxyindole and the derivatives thereof, 6,7-dihydroxyindole and the derivatives thereof, 2,3-dihydroxyindole and the derivatives thereof, dihydroxycinnamates, hydroxycoumarins, hydroxyisocoumarins, hydroxycoumarones, hydroxyisocoumarones, hydroxychalcones, hydroxychromones, anthocyanes, quinones, hydroxyxantones, and the mixtures of two or more of the previous compounds.

36. (Currently Amended): A method according to claim 35, ~~characterized in that~~ wherein the orthodiphenols are selected ~~amongst~~ from the group consisting of 5,6-dihydroxyindole and 5,6 dihydroxyindole carboxylic acid.

37. (Currently Amended): A method according to ~~one of claims 19 to 36,~~ ~~characterized in that~~ claim 19, wherein the orthodiphenols are contained in plant, fruit or citrus fruit extracts, or ~~as well as in~~ mixtures of such extracts.

38. (Currently Amended): A method according to claim 37, ~~characterized in that~~ wherein the orthodiphenols are contained in tea, grape, apple, banana, ~~or~~ potato extracts, ~~as well as in~~ or mixtures of such extracts.

39. (Currently Amended): A method according to claim 19 ~~characterized in that~~ wherein the coupling agents are selected ~~amongst~~ from the group consisting of meta-aminophenols, meta-phenylenediamines, metadiphenols, naphthols, ~~and~~ heterocyclic

coupling agents ~~such as for example~~, indole derivates, indolin derivates, sesamol and the derivates thereof, pyridine derivates, pyrazolotriazole derivates, pyrazolones, indazoles, benzimidazoles, benzothiazoles, benzoxazoles, 1,3-benzodioxoles, quinolins and their addition salts with an acid.

40. (Currently Amended): A method according to claim 39, ~~characterized in that~~ wherein the coupling agents are selected ~~amongst from the group consisting of~~ 2,4-diamino 1-( $\beta$ -hydroxyethyloxy) benzene, 2-methyl 5-amino phenol, 5-N-( $\beta$ -hydroxyethyl)amino 2-methyl phenol, 3-amino phenol, 1,3-dihydroxy benzene, 1,3-dihydroxy 2-methyl benzene, 4-chloro 1,3-dihydroxy benzene, 2-amino 4-( $\beta$ -hydroxyethylamino) 1-methoxy benzene, 1,3-diamino benzene, 1,3-bis-(2,4-diaminophenoxy) propane, sesamol, 1-amino 2-methoxy 4,5-methylenedioxy benzene,  $\alpha$ -naphthol, 6-hydroxy indole, 4-hydroxy indole, 4-hydroxy N-methyl indole, 6-hydroxy indoline, 2,6-dihydroxy 4-methyl pyridine, 1-H 3-methylpyrazole 5-one, 1-phenyl 3-methylpyrazole 5-one, 2-amino 3-hydroxypyridine, 3,6-dimethyl-pyrazolo-[3,2-c]-1,2,4-triazole, 2,6-dimethyl-pyrazolo-[1,5-b]-1,2,4-triazole and the addition salts thereof with an acid.

41. (Currently Amended): A method according to claim 39, wherein ~~or 40,~~ ~~characterized in that~~ coupling agent(s) account(s) for 0.0001 to 15% in weight of the total weight of the composition, ~~and preferably from 0.001 to 10%.~~

42. (Currently Amended): A method according to claim 17, wherein ~~one of claims 17 to 41, characterized in that~~ the hair dyeing composition ~~comprise~~ comprises one or more direct dyes, ~~preferably selected from the nitrated, azoic or anthraquinonic, neutral, cationic or anionic dyes.~~

43. (Currently Amended): A method according to claim 42 ~~characterized in that~~ wherein direct dyes account for 0.001 to 20% in weight, ~~preferably from 0.01 to 10% in~~ weight of the total weight of the composition.

44. (Currently Amended): A method according to claim 17, wherein ~~any of claims 17 to 43, characterized in that~~ the hair dyeing composition comprises one or more amino acids and/or one or more proteins.

45. (Currently Amended): A method according to claim 44, ~~characterized in that~~ wherein the amino acids comprise at least one thiol group and are selected ~~amongst from~~ amino acids having an amine function in position  $\alpha$  compared with a carboxylic acid function.

46. (Currently Amended): A method according to claim ~~44, 45, characterized in that~~ wherein amino acid(s) is/are selected ~~amongst from~~ cysteine and the derivatives thereof, and the proteins are selected ~~amongst from~~ glutathione and the derivatives thereof.

47. (Currently Amended): A method according to claim 44, wherein ~~one of claims 42 to 46, characterized in that~~ the molar ratio of the amino acid(s) and of the protein(s) to the other oxidation dyes varies from 0.001 to 50, ~~preferably from 0.01 to 5, and more preferably from 0.05 to 2.5.~~

48. (Currently Amended): A method according to ~~any of claims 17 to 47, characterized in that~~ claim 1, wherein the hair dyeing composition further comprises an enzyme.

49. (Currently Amended): A method according to claim 48, ~~characterized in that~~ wherein the enzyme is selected ~~amongst from the group consisting of~~ pyranose oxydases glucose oxydases, glycerol oxydases, lactate oxidases, pyruvate oxidases, uricases, cholin

oxidases, sarcosin oxidases, bilirubin oxydases, laccases, tyrosinases, peroxidases, catalases, superoxydesdimutases, ~~and the mixtures thereof, or amongst~~ plant or animal extracts containing the above-mentioned enzymes, and mixtures thereof.

50. (Currently Amended): A method according to claim 49, ~~characterized in that~~ wherein the enzyme is a tyrosinase selected amongst the tyrosinases.

51. (Currently Amended): A method according to claim 49, wherein ~~or 50,~~ ~~characterized in that~~ the hair dyeing composition comprises  $5 \cdot 10^{-3}$  to 5 mg, ~~preferably  $5 \cdot 10^{-2}$~~  ~~to 0,5-0,5 mg~~ of enzyme per millilitre of final composition.

52. (Currently Amended): A method according to claim 1, wherein ~~any of claims 17 to 51, characterized in that~~ the oxidation dye is present in an amount ranging from 1 mM to 10 mM per litre of composition.

53. (Currently Amended): A method according to claim 1, wherein ~~any of claims 17 to 52, characterized in that~~ the hair dyeing composition further comprises an effective amount of a system comprising a first component selected amongst the Mn(II) and/or Zn(II) salts and oxide and the mixtures thereof and a second component selected ~~amongst~~ from alkaline hydrogenocarbonates, earth alkaline hydrogenocarbonates and the mixtures thereof, the proportions of the first and second component are such that:

$$\frac{[Mn(II)]}{[HCO_3]} \leq 1 \text{ with } [Mn(II)] \neq 0$$

$$\frac{[Zn(II)]}{[HCO_3]} \leq 1 \text{ with } [Zn(II)] \neq 0$$

$$\frac{[Mn(II) + Zn(II)]}{[HCO_3]} \leq 1 \text{ with } [Mn(II)] \text{ and } [Zn(II)] \neq 0$$

where [Mn(II)], [Zn(II)] and [HCO<sub>3</sub>] represent respectively the Mn(II), Zn(II) molar concentrations and HCO<sub>3</sub> in the composition.

54. (Currently Amended): A ~~composition~~ method according to claim 53, ~~characterized in that~~ wherein the ratio  $\frac{[\text{Mn(II)}]}{[\text{HCO}_3]}$  varies from 10<sup>-5</sup> to 10<sup>-1</sup>, ~~preferably from 10<sup>-3</sup> to 10<sup>-2</sup>, and more preferably is in the order of 5.10<sup>-3</sup>.~~

55. (Currently Amended): A ~~composition~~ method according to claim 53, ~~wherein or 54, characterized in that~~ the ratio  $\frac{[\text{Zn(II)}]}{[\text{HCO}_3]}$  varies from 10<sup>-4</sup> to 1, ~~preferably from 10<sup>-3</sup> to 1, and more preferably is in the order of 5.10<sup>-4</sup>.~~

56. (Currently Amended): A ~~composition~~ method according to claim 53, wherein ~~any of claims 53 to 55, characterized in that~~ the ratio  $\frac{[\text{Mn(II)} + \text{Zn(II)}]}{[\text{HCO}_3]}$  varies from 10<sup>-5</sup> to 10<sup>-1</sup>, ~~preferably 10<sup>-3</sup> to 10<sup>-2</sup>.~~

57. (Currently Amended): A ~~composition~~ method according to claim 53, wherein ~~any of claims 53 to 55, characterized in that~~ the Mn(II) and Zn(II) salts are selected ~~amongst~~ from the group consisting of chloride, fluoride, iodure, sulphate, phosphate, nitrate, perchlorate, and carboxylic acid salts and the mixtures thereof.

58. (Currently Amended): A ~~composition~~ method according claim 53, wherein ~~to any of claims 53 to 57, characterized in that~~ the Mn(II) and/or Zn(II) salt is a chloride.

59. (Currently Amended): A ~~composition~~ method according to any of claims 53 to 58, characterized in that the carboxylic acid salts are hydroxylated carboxylic acid salts.



60. (Currently Amended): A ~~composition~~ method according to claim 53, wherein  
~~any of claims 53 to 58, characterized in that~~ the hydroxylated carboxylic acid salt is gluconate.

61. (Currently Amended): A ~~composition~~ method according to claim 53, wherein  
~~any of claims 53 to 60, characterized in that~~ the hydrogenocarbonate is selected ~~amongst~~  
from the group consisting of sodium hydrogenocarbonate, potassium hydrogenocarbonate  
and the mixtures thereof.

62. (New): The method according to claim 1, wherein the at least one dye is an  
oxidation dye.

63. (New): The method according to claim 1, wherein the oxyethylenated polymer  
amount in the composition is lower than 15% in weight based on the total volume of the  
composition.

63. (New): The method according to claim 1, wherein the oxyethylenated polymer  
amount in the composition is lower than 10% in weight based on the total volume of the  
composition.

64. (New): The method according to claim 7, wherein the physiologically  
acceptable medium further comprises a bacteriological property.

65. (New): The method according to claim 11, wherein the (C<sub>1</sub>-C<sub>6</sub>) lower alkanol is  
selected from the group consisting of ethanol and isopropanol.

66. (New): The method according to claim 18, wherein the application duration on  
the scalp and on the hair of the antipenetrating composition is from 1 to 10 minutes.

67. (New): The method according to claim 62, wherein the application duration on  
the scalp and on the hair of the antipenetrating composition is from 1 to 10 minutes.

68. (New): The method according to claim 20, wherein the oxidation base accounts for 0.005 to 8% in weight of the total weight of the composition.

69. (New): A method according to claim 39, wherein coupling agent(s) account(s) for 0.001 to 10% in weight of the total weight of the composition.

70. (New): A method according to claim 41, wherein the hair dyeing composition comprises one or more direct dyes selected from the group consisting of nitrated, azoic or anthraquinonic neutral dyes, nitrated, azoic or anthraquinonic cationic dyes, and nitrated, azoic or anthraquinonic anionic dyes.

71. (New): A method according to claim 42 wherein direct dyes account for 0.01 to 10% in weight of the total weight of the composition.

72. (New): A method according to claim 44, wherein the molar ratio of the amino acid(s) and of the protein(s) to the other oxidation dyes varies from 0.05 to 2.5.

73. (New): A method according to claim 49, wherein the hair dyeing composition comprises  $5 \cdot 10^{-2}$  to 0.5 mg of enzyme per millilitre of final composition.